

IN THE CLAIMS:

Please amend the claims as follows:

1-63. (Canceled)

64. (Currently Amended) A computer system, comprising:
at least one processor; and
a memory;
wherein the computer system is configured to couple to an emulator and a peripheral device, wherein the emulator is configured to emulate an integrated circuit designed to communicate bidirectionally with [[a]] the computer peripheral device;
wherein the memory has computer instructions stored thereon that are executable by the at least one processor to cause the computer system to:
receive one or more digital data packets at a first transmission rate from the computer peripheral device via a first peripheral interface coupled to the computer system and to the peripheral device;
store the digital data packets in a memory buffer;
retrieve the digital data packets from the memory buffer; and
send data contained in the received digital data packets to the emulator at a second transmission rate over a second computer peripheral interface coupled to the computer system and to the emulator, wherein the second transmission rate is slower than the first transmission rate.
65. (Currently Amended) The computer system of claim 64, wherein the peripheral device is a network interface device:
wherein the emulator is configured to emulate an integrated circuit designed to communicate bidirectionally with the network interface device according to one or more network communication protocols; and
wherein the network interface device is configured to communicate according to the one or more network communication protocols.

~~wherein the instructions are executable to cause the computer system to modify data in the received one or more digital data packets to a data format accepted by the emulator[.]~~

66. (Currently Amended) The computer system of claim 65, wherein the ~~computer~~ peripheral device is a network interface card; and
wherein the instructions are executable as a multi-threaded program.

67. (Previously Presented) The computer system of claim 64, wherein the emulator is incapable of receiving and processing data sent to the emulator at the first transmission rate.

68. (Currently Amended) The computer system of claim 65, wherein the emulator is implemented, at least in part, using field programmable gate arrays; and
wherein the field programmable gate arrays are operable to be programmed with a hardware model corresponding to a design of the integrated circuit, wherein the design allows bidirectional communication with the ~~computer~~ peripheral device.

69. (Currently Amended) The system of claim 64, wherein the first and second computer peripheral interfaces are [[is a]] network connections; and

wherein the instructions are executable to cause the computer system to repackage data from the stored digital data packets.

70. (Currently Amended) The system of claim 65, wherein the instructions are executable to cause the computer system to modify data in the received one or more digital data packets to a data format accepted by the emulator wherein the instructions are executable to cause the computer system to log data corresponding to received data and/or sent data in a log file.

71. (Canceled)

72. (Previously Presented) The computer system of claim 65, wherein the received one or more digital data packets are variable in size.

73. (Currently Amended) A method, comprising:
- a first computer receiving a plurality of data packets at a first transmission rate from a first ~~computer~~ peripheral device via a first interface, wherein the computer includes at least one processor and a memory;
- the first computer buffering one or more of the plurality of data packets in the memory, wherein the buffered one or more packets are destined for an emulator coupled to the first computer via a[[n]] second interface, wherein the emulator is configured to emulate a design of an integrated circuit used as a component of a second ~~computer~~ peripheral device, and wherein the integrated circuit is designed to communicate bidirectionally with the first ~~computer~~ peripheral device; and
- the first computer sending data contained in the buffered one or more packets to the emulator via the second interface at a second transmission rate that is slower than the first transmission rate.
74. (Currently Amended) The method of claim 73, ~~wherein the data sent to the emulator is usable to debug the design of the integrated circuit; and~~
- wherein the first and second interfaces are [[is a]] network connections.
75. (Previously Presented) The method of claim 73, further comprising:
- the first computer repackaging data from the buffered data packets;
- wherein the repackaged data is the data sent from the first computer to the emulator.
76. (Previously Presented) The method of claim 73, further comprising:
- the emulator receiving and processing the data sent by the first computer, wherein said processing is performed, at least in part, according to the design of the integrated circuit.
77. (Previously Presented) The method of claim 76, further comprising the emulator sending data corresponding to the received and processed data to a second computer.

78. (Previously Presented) The method of claim 73, wherein the emulator is configured to emulate a network interface card, wherein the integrated circuit is designed to be a component of the network interface card; and

wherein the first transmission rate is a data rate of an ethernet network.

79. (Previously Presented) The method of claim 73, further comprising the first computer, for each data packet received:

examining that data packet;

determining if that data packet is addressed to the emulator, wherein the emulator is configured to emulate a network interface card; and

if that data packet is addressed to the emulator, buffering that data packet and sending data contained in the buffered packet to the emulator at the second transmission rate.

80. (Currently Amended) The method of claim 73, wherein the first and second peripheral devices are network interface devices;

wherein the emulator is configured to emulate an integrated circuit designed to communicate bidirectionally with the first network interface device according to one or more network communication protocols; and

wherein the second network interface device is configured to communicate according to the one or more network communication protocols.

wherein the emulator is implemented, at least in part, using field programmable gate arrays; and

wherein the field programmable gate arrays are operable to be programmed with a hardware model corresponding to the design of the integrated circuit[.]]

81. (Currently Amended) A computer-readable storage medium having instructions stored thereon that are executable by at least one processor to cause a computer system including the at least one processor to perform operations comprising that include:

receiving, at a first transmission rate, one or more digital data packets sent from a ~~computer~~ peripheral device via a first peripheral interface;

buffering the received digital data packets within a memory of the computer system; and at a second transmission rate that is slower than the first transmission rate, sending data contained in the buffered digital data packets to an emulator that is coupled to the computer system via a second ~~computer~~ peripheral interface, wherein the emulator is configured to receive and process the sent data according to a design of an integrated circuit being emulated, wherein the integrated circuit is designed to communicate bidirectionally with the ~~computer~~ peripheral device.

82. (Previously Presented) The non-transitory computer-readable medium of claim 81, wherein the operations further include, for each digital data packet received by the computer system:

examining that digital data packet;

determining if that digital data packet is addressed to the emulator; and

buffering that digital data packet and sending data contained in that buffered packet to the emulator only if that digital data packet is addressed to the emulator.

83. (Currently Amended) The non-transitory computer-readable medium of claim 81, wherein the peripheral device is a network interface device; and
wherein the integrated circuit is designed to communicate bidirectionally with the
network interface device according to one or more network communication protocols via which
the network interface device is also configured to communicate.
~~wherein the computer peripheral device is a network device and wherein the received one or~~
~~more digital data packets are transmitted from the network device via a network connection~~
~~according to a network communications protocol[.]~~

84. (Previously Presented) The non-transitory computer-readable medium of claim 81, wherein the operations further include repackaging the data contained in the buffered data packets prior to sending the data to the emulator at the second transmission rate.

85. (Previously Presented) The non-transitory computer-readable medium of claim 81, wherein the emulator is configured to receive and process data sent at the second transmission rate, but is not configured to receive and process data sent at the first transmission rate.

86. (Currently Amended) The non-transitory computer-readable medium of claim 81, wherein the ~~computer~~ peripheral device is coupled to a different computer system, wherein the different computer system is configured to send data from the ~~computer~~ peripheral device via a ~~network interface, and wherein the network interface is the first computer~~ peripheral interface.

87. (Currently Amended) A method comprising:

receiving digital data ~~from a circuit emulator~~ at a program running on at least one processor of a computer, wherein the digital data is received at a first transmission rate from a circuit emulator via a first peripheral interface, and wherein the circuit emulator is configured to emulate an integrated circuit that is designed to communicate bidirectionally with a ~~computer~~ peripheral device;

storing the received data in a memory of the computer, wherein said storing is performed by the program;

retrieving the stored data from the memory, wherein said retrieving is performed by the program; and

transmitting the retrieved data to the ~~computer~~ peripheral device at a second transmission rate over a second computer peripheral interface coupled to the computer, wherein the first transmission rate is slower than the second transmission rate, and wherein said transmitting is performed by the program.

88. (Previously Presented) The method of claim 87, wherein the circuit emulator is incapable of receiving and processing data transmitted to the circuit emulator at the second transmission rate.

89. (Currently Amended) The method of claim 87, wherein the peripheral device is a network interface device, wherein the integrated circuit is designed to communicate bidirectionally with the network interface device using one or more network protocols that the network interface device is also configured to use further comprising keeping a record of the data received from the circuit emulator, wherein the received data is usable to optimize and/or debug a design of the integrated circuit.

90. (Previously Presented) The method of claim 87 further comprising modifying the received data from the circuit emulator to a data format accepted by the ~~computer~~ peripheral device, wherein said modifying is performed by the program.

91. (Currently Amended) The method of claim 87, wherein said receiving data from the circuit emulator is executed in a first thread, and said transmitting the data received from the circuit emulator is executed in a second thread; ~~and~~

~~wherein the computer peripheral device is a network interface device.~~

92. (Currently Amended) A computer system, comprising:
at least one processor; and
a memory having computer instructions stored thereon that are executable by the at least one processor to cause the computer system to perform operations including:
receiving digital data from a circuit emulator at a first transmission rate via a first peripheral interface coupled to the computer system, wherein the circuit emulator is configured to emulate an integrated circuit that is designed to communicate bidirectionally with a ~~computer~~ peripheral device;
storing the received data within the computer system;
retrieving the stored data from within the computer system; and
transmitting the retrieved data to the ~~computer~~ peripheral device at a second transmission rate over a second computer peripheral interface coupled to the computer system, wherein the first transmission rate is slower than the second transmission rate.
93. (Previously Presented) The computer system of claim 92, wherein the circuit emulator is incapable of receiving and processing data transmitted to the circuit emulator at the second transmission rate.
94. (Currently Amended) The computer system of claim 92, wherein the operations further include modifying the received data from the circuit emulator to a data format accepted by the ~~computer~~ peripheral device.
95. (Currently Amended) The computer system of claim 92, wherein the operations further include keeping a record of the data transmitted to the ~~computer~~ peripheral device.
96. (Currently Amended) The computer system of claim 92, wherein the peripheral device is a network interface device, and wherein the integrated circuit is designed to communicate bidirectionally with the network interface device using one or more network protocols that the network interface device is also configured to use the operations further include recording the throughput of the transmitted data.

97. (Currently Amended) A non-transitory computer-readable medium having stored thereon computer instructions that are executable by a computing device to cause the computing device to perform operations comprising including:

receiving digital data from a circuit emulator at a first transmission rate via a first peripheral interface, wherein the circuit emulator is configured to emulate an integrated circuit that is designed to communicate bidirectionally with a ~~computer~~ peripheral device;

storing the received data in a memory of the computing device;

retrieving the stored data from the memory; and

transmitting the retrieved data at a second transmission rate to the ~~computer~~ peripheral device over a second computer peripheral interface coupled to the computing device, wherein the first transmission rate is slower than the second transmission rate.

98. (Previously Presented) The non-transitory computer-readable medium of claim 97, wherein the second transmission rate exceeds a transmission rate at which the circuit emulator is capable of receiving and processing data transmitted to the circuit emulator.

99. (Currently Amended) The non-transitory computer-readable medium of claim 97, wherein the operations further include modifying the received data to a data format accepted by the ~~computer~~ peripheral device.

100. (Currently Amended) The non-transitory computer-readable medium of claim 97, wherein the operations further include keeping a record of the data received from the circuit emulator and the data transmitted to the ~~computer~~ peripheral device, wherein the received data and the transmitted data are usable to optimize and/or debug a design of the integrated circuit.

101. (Currently Amended) The non-transitory computer-readable medium of claim 97, wherein the peripheral device is a network interface device, and wherein the integrated circuit is designed to communicate bidirectionally with the network interface device using one or more network protocols that the network interface device is also configured to use wherein said receiving digital the data operations further include recording the throughput of the transmitted data.